

### REMARKS

Claims 1, 2, 4 to 13, 15 to 24, and 26 to 40 are pending in this application. Of these, claims 1, 12, 23, 33 and 37 are independent.<sup>1</sup> Favorable reconsideration and further examination are respectfully requested.

Initially, claim 23 was objected to for using the language "an article comprising...". Without conceding the propriety of the objection, Applicant has amended claim 23 and its corresponding dependent claims along the lines suggested by the Examiner. However, Applicant has used the word "machine" instead of "computer", since many types of machines other than computers include processor(s) that are capable of executing instructions to produce a result. The claim language is thus believed to be proper, and withdrawal of the objection is requested.

The claims were rejected under 35 U.S.C. §101 for allegedly failing to comply with the utility requirement. In particular, it was said in the Office Action that "[s]ince there are no practical applications claimed, i.e., no physical transformation taken place, nor a useful, concrete and tangible result being produced, the claims are non-statutory". Applicant respectfully disagrees. As explained in the enclosed memorandum from John J. Love, Deputy Commissioner For Patent Examination Policy,

A practical application in this context can be the result itself, and does not require that steps or additional limitations be added to the claims...It is the result that should be the focus. If the result has a real world practical application/use, then the test has been satisfied. *The claim need not include the uses to which the result is ultimately put, just the result itself.* (emphasis added)

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<sup>1</sup> The Examiner is urged to independently confirm this recitation of the pending claims.

In this case, each of the independent claims aligns data in a one frame of data, based on the phase of another frame, to make a start of the second frame coincide with a start of a byte boundary.

As explained in the application,

Data frames are transmitted over an optical network in a serial data stream. A de-serializer device is required at the termination of the optical network in order to convert the serial data stream to parallel data. The conversion, however, can change the byte alignment (phase) of the frames. As a result, the frame and byte boundaries of the converted data are unknown. A data framer may be used at the recipient end of the optical network to restructure the frame and thereby correct any misalignment (i.e., phase errors).<sup>2</sup>

The claims' result, which is to make a start of the second frame coincide with a start of a byte boundary has a practical application in that it can correct for misalignment of byte boundaries. Thus, the output result of the claims has a real world practical application/use, therefore, the test for practical applicability has been satisfied according to the Deputy Commissioner.

For at least the foregoing reasons, Applicant submits that the claims comply fully with §101. There being no other outstanding issues, Applicant respectfully submits that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney can be reached at the address shown below. All telephone calls should be directed to the undersigned at 617-521-7896.

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<sup>2</sup> Application, page 2.

Please apply any fees or credits due in this case, which are not already covered by check,  
to Deposit Account 06-1050 referencing Attorney Docket No. 10559-697001.

Respectfully submitted,

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MEMORANDUM

DATE: April 12, 2007  
TO: Technology Center Directors  
FROM: John J. Love *JL*  
Deputy Commissioner  
For Patent Examination Policy  
SUBJECT: Clarification of Interim Guidelines For Examination of Patent Applications  
for Subject Matter Eligibility

Certain inconsistencies have come to my attention in the application of the Interim Guidelines For Examination of Patent Applications for Subject Matter Eligibility, which are set forth in section 2106 of the Manual of Patent Examining Procedure (8<sup>th</sup> Ed. Rev. 5, Aug. 2006) (MPEP). The situation arises in the context of whether or not a claim is for a practical application of an abstract idea, law of nature, or natural phenomenon. As stated in the Interim Guidelines, a claim is for a practical application of an abstract idea, law of nature, or natural phenomenon when the claimed invention "transforms" an article or physical object to a different state or thing, or when the claimed invention produces a useful, concrete and tangible result. See MPEP 2106, subsection IV.C.2.

Focus on Result

A practical application in this context can be the result itself, and does not require that steps or additional limitations be added to the claim. As stated in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed. Cir. 1998):

Today, we hold that the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces "a useful, concrete and tangible result"—a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.

It is the result that should be the focus. If the result has a real world practical application/use, then the test has been satisfied. The claim need not include the uses to which the result is ultimately put, just the result itself. Another example would be an improved method for measuring blood sugar levels in human beings. In this example, the end result is the blood sugar level which is a practical application for diagnostic purposes. Accordingly, reciting the improved method, and the result it achieves—the measurement of the blood sugar level—is all that is necessary for patent-eligibility. The diagnostic steps that occur after the determination of the blood sugar level need not necessarily be present in the claims in order for the claims to be statutory.

Use of Specific Terminology

Another area of inconsistency surrounds the use of the terms such as “determining,” “calculating,” and similar expressions. Some object to these as not creating a tangible result. Such terms may in fact be sufficient to establish a tangible result. See, e.g., *State Street*, 149 F.3d at 1375, 47 USPQ2d at 1602 (holding the calculation of a number having a real world value and to be a “useful, concrete, and tangible result”) and *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999) (holding a method claim including the generation of a message record for an interexchange call to be statutory). The specification should be referred to for a meaning of the terms. See *In re Musgrave*, 431 F.2d 882, 893, 167 USPQ 280, 289 (CCPA 1970) (“[w]e cannot agree with the board that these claims (all the steps of which can be carried out by the disclosed apparatus) are directed to non-statutory processes merely because some or all the steps therein can also be carried out in or with the aid of the human mind or because it may be necessary for one performing the processes to think. . . .”).